

The examiner has required restriction under 35 USC §121. It is stated in 35 USC §121 that restriction may be required when "two or more independent and distinct inventions are claimed in one application" (emphasis added). Even assuming that the groups of claims of the present invention are distinct, the examiner has not shown how they are independent. For this reason alone, i.e., failure to meet a statutory prerequisite, the restriction requirement should be withdrawn.

The examiner cites MPEP §806.05(f) and MPEP §806.05(h) as authority for electing claims between the product and the process. MPEP §806.05(f) provides that a product and a process of making the product can be shown to be distinct inventions if the product as claimed can be made by another materially different process. The applicants submit that the examiner has not shown the Group I claims to a catalyst composition and the Group II claims for a process of making the catalyst to be distinct and has not shown the catalyst of Group I as claimed can be made in a process materially different from the process of Group II as claimed.

MPEP §806.05(h) provides that a product and a process of using the product can be shown to be distinct inventions if the process as claimed can be used with another materially different product. The applicants submit that the examiner has not shown the Group I claims to a catalyst composition and the Group III claims to a method of using the product to be distinct and has not shown

the process of Group III as claimed can be used with a product materially different product from the catalyst of Group I as claimed.

The applicants request withdrawal and reconsideration of the Final Restriction for the reasons above, i.e., failure to meet the practices and procedures relative to the prosecution of patent applications before the U.S. Patent and Trademark Office under MPEP §806.05(f) and MPEP §806.05(h).

Claims 1-17 are rejected under 35 USC §103. The applicants respectfully traverse these rejections and requests reconsideration of the application in view of the following remarks.

Claims 1-17 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent no. 5,008,427 ("Brazdil et al"). Specifically, the Office Action suggests that Brazdil et al discloses a catalyst composition for vapor phase ammoxidation of paraffin of the formula $VSb_m A_a D_d O_x$ where A is titanium, tin, iron, chromium or gallium, D is lithium, magnesium, calcium, strontium, barium, cobalt, nickel, zinc, germanium, niobium, zirconium, molybdenum, tungsten, copper, tellurium, selenium, bismuth, cerium, indium, arsenic, boron or manganese, m is 0.8-4, a is 0.01-2 and d is 0-2. The present application claims a catalyst composition of the formula $VSb_a M_b Q_c O_x$, where M is magnesium, aluminum, zirconium, silicon, hafnium, titanium or niobium and Q

is rhenium, tungsten, molybdenum, tantalum, manganese, phosphorus, cerium, tin, boron, scandium, bismuth, gallium, indium, iron, chromium, lanthanum, yttrium, zinc, cobalt, nickel, cadmium, copper, strontium, barium, calcium, silver, potassium, sodium or cesium. The elements of M are usually used as supports for catalytically active compositions and are used in the present invention to isolate active vanadium and antimony species. The function of element M as claimed in the present application is different from that of the elements of Bradzil et al.

Every limitation in the claims must be given effect rather than considering one in isolation from the others [In re Geerdes, 491 F2d 1260, 180 USPQ 789 (CCPA 1974)]. The patentable difference of the present invention over the references is that vanadium and antimony are isolated in a matrix of the oxides of magnesium, aluminum, zirconium, silicon, hafnium, titanium or niobium.

The examiner admits that the difference between the claimed invention and the reference is that vanadium and antimony are isolated in a matrix of the oxides of magnesium, aluminum, zirconium, silicon, hafnium, titanium or niobium but contends that it would be obvious to isolate vanadium and antimony in a matrix of metal oxides. MPEP §2142 states the criteria to establish a *prima facie* case for obviousness. MPEP §2142 requires some suggestion or motivation to modify the reference. Such suggestion or motivation to isolate vanadium and antimony in a matrix of

metal oxides did not exist in Brazdil et al, as the examiner admits. The Examiner states that such a modification would be obvious but gives no motivation for such a modification. The Examiner is attempting a hindsight reconstruction of the claimed invention by using elements in an undisclosed function. The criteria to establish a *prima facie* case for obviousness requires that the modification **should** be made, not that it **can** be made. MPEP§2142 also requires a reasonable expectation of success. While it may have been obvious-to-try a catalyst in which vanadium and antimony are isolated in a matrix of metal oxides, obvious-to-try is not equivalent to a reasonable expectation of success. Further, according to MPEP§2142, the prior art reference must teach or suggest all the claim limitations. The cited reference does not teach or suggest vanadium and antimony isolated in a matrix of the oxides of magnesium, aluminum, zirconium, silicon, hafnium, titanium or niobium.

The rejection of Claims 1-17 as proposed by the examiner does not meet the requirements for a *prima facie* case for obviousness and the applicants request that the rejection be withdrawn. In support of the arguments above, the applicants submit the attached Declaration under 37 CFR §1.132. The applicants request that the examiner enter this Declaration and consider it in support of the applicants' argument to traverse the reference cited in the Office Action.

The attached Declaration under 37 CFR §1.132 shows that the catalyst of Brazdil et al does not have vanadium and antimony isolated in a matrix of metal oxides. In this Declaration, Example M of Brazdil et al cited by the examiner was reproduced. A sample of the Brazdil et al catalyst was analyzed by powder X-ray diffraction and showed the presence of vanadium-containing phases (VSbO_4) which indicates that vanadium and antimony sites are not isolated in a matrix of metal oxides. Example 6 of the present application was also reproduced to confirm that vanadium and antimony sites are isolated in a matrix of metal oxides.

The applicants respectfully direct the examiner's attention to the powder X-ray diffraction (XRD) patterns attached to the Declaration under 37 CFR §1.132 which show that the distinctive peaks associated with the VSbO_4 phase which indicates that vanadium and antimony sites are not isolated in a matrix of metal oxides are not present in the claimed catalyst but are present in the catalyst of Brazdil et al. A person having ordinary skill in the art reading Brazdil et al or reproducing the examples of Brazdil et al would not be motivated to make a catalyst in which the vanadium and antimony sites are isolated in a matrix of metal oxides since Brazdil et al does not suggest such a modification.

Even if a *prima facie* case of obviousness were established by the cited reference, the unexpected results of the claimed invention would satisfy the requirements of patentability. The

attached Declaration under 37 CFR §1.132 shows improved performance for a catalyst of the claimed invention over a catalyst of Brazdil et al.

The catalyst of the present application have improved catalytic behavior in terms of selectivity to acrylonitrile. The applicants respectfully direct the examiner's attention to Table 1 in the Declaration under 37 CFR §1.132 in which, at the same process conditions, the claimed catalyst had selectivities of 48.2% and 51.0% versus 19.6% and 25.8% for the catalyst of Brazdil et al. Even taking into account the possible higher activity (propane conversion) of the catalyst of Brazdil et al, the overall yield (conversion x selectivity) for acrylonitrile is advantageous for the catalyst of the present invention: 2.9% v. 4.6% and 4.8% v. 5.8%.

In summary, the applicants maintain that the catalysts of the present invention have a different structure and have improved catalytic performance over that of the prior art catalysts. One theory, without limiting the scope of the claims of the present invention, is that eliminating the presence of the rutile phase of vanadium-antimony compounds, such as VSbO_4 , and isolating catalytically active vanadium and antimony species with inert metal oxides results in a structural difference in the catalyst composition which improves selectivity to acrylonitrile.

SERIAL NO. 10/036,866

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PATENT APPLICATION

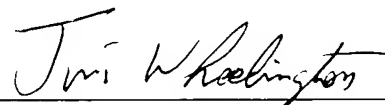
STC-01-0002

The applicants believe that no extension of term is required.

However, this conditional petition is being made to provide for the possibility that the applicants have inadvertently overlooked the need for a petition and fee for extension of time. If an additional extension of time is required, please consider this a petition therefor. The Commissioner is hereby authorized to charge any additional fees due by filing this paper or to credit any overpayment to Account No. 502025.

On the basis of the above remarks and the attached Declaration under 37 CFR §1.132, reconsideration of this application is requested and its allowance requested at the examiner's earliest convenience. No new matter has been added.

Respectfully submitted,



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